

STATE OF CALIFORNIA  
STATE WATER RIGHTS BOARD

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In the matter of Application )  
17770 by Mammoth County Water )  
District )

Source: Twin Lakes  
County: Mono

Decision No. D 904

Decided: May 14, 1958

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In attendance at conference held by the staff of the State Water Rights Board in Bishop on April 3, 1958:

L. M. Butler	President, Mammoth County Water District
Hugh J. O'Connell	Secretary, Mammoth County Water District
N. Edward Denton and Vern Summers	Attorneys for Applicant
Jess W. Chance, Sr.	Protestant
Mildred F. Chance	Protestant
Willis Smith	Attorney for Protestants
Jess W. Chance, Jr.	Interested party
Gerald Chance	Interested party
Howard Arcularius	Interested party
K. L. Woodward	Supervising Hydraulic Engineer, representing State Water Rights Board

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## DECISION

### Substance of the Application

Application 17770 was filed by Mammoth County Water District on August 13, 1957, for a permit to appropriate 2 cubic feet per second (cfs) of unappropriated water, year-round, from Twin Lakes on Mammoth Creek tributary to Owens River via Mammoth Creek thence Hot Creek in Mono County for municipal and domestic purposes. Water is to be diverted by a wood and concrete dam approximately 3 feet high by 40 feet long, at the outlet of Twin Lakes within the SW $\frac{1}{4}$  of SW $\frac{1}{4}$  of Section 4, T4S, R27E, MDB&M\* and will be conveyed through about 11,000 feet of 8" steel pipe for use within the District boundaries in Sections 33, 34 and 35, T3S, R27E. According to the application, the present population of the place of use is 1,188 persons, with an expected increase to 12,000 persons by 1980. It is further estimated that use will eventually extend to about 200 acres of domestic lawns and gardens in addition to household use.

### Protest and Answer

A written protest against approval of Application 17770 is of record from Jess W. Chance, Sr., and Mildred F. Chance, doing business as Jess Chance and Sons, based upon riparian rights and continuous and uninterrupted use since prior

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\* Hereinafter all township references are to Mount Diablo Base and Meridian (MDB&M).

to 1900. The protestants allege there is insufficient water at present for irrigation, livestock and domestic use on approximately 400 acres owned by them; that they irrigate 360 acres from April to October of each year; that all water in Mammoth Creek is necessary for their present requirements, and that during many dry years there is not sufficient water to complete the irrigation season.

In reply to the protest, the applicant states that there is a sufficient water supply for both the reasonable use of the riparian protestant and the applicant.

#### Proceedings in Lieu of Hearing

The applicant and protestants, with the approval of the State Water Rights Board, stipulated to the proceedings in lieu of hearing as provided for by Section 737 of the Board's rules, and a conference was held by K. L. Woodward, an engineer of the Board, with all record interested parties in the City Council Chambers, City Hall, Bishop, California, on April 3, 1958.

#### Records Relied Upon

The records relied upon in support of this decision are Application 17770 and all relevant information on file therewith with particular reference to a memorandum dated April 7, 1958, of the conference held on April 3, 1958; streamflow records of City of Los Angeles, Department of Water and Power, at Station "Hot Creek-Highway" for the period October, 1946 through

September, 1957; a publication of the Division of Water Resources entitled "Report on Water Supply and Use of Water on Middle Fork of Feather River and Tributaries, Plumas and Sierra Counties, California", dated August, 1937; Division of Water Resources, "Report on Investigation and Water Master Service on Middle Fork of Feather River Above Beckwith, Sierra and Plumas Counties, California, During Season of 1937", dated April, 1938; United States Geological Survey, Devils Post, California and Mt. Morrison, California, quadrangles, both 15-minute series, dated 1953; and United States Weather Bureau, Climatological Data, California.

#### Source and Watershed

Mammoth Creek heads on the eastern slope of the Sierra Nevada at Barney and Woods Lakes near the Mono-Fresno County line. The creek flows in a northwesterly direction for about 3 miles through Skelton and Arrowhead Lakes into Lake Mary, thence in a northerly direction for about  $1\frac{1}{2}$  miles through Lake Mamie into Twin Lakes, the proposed point of diversion under Application 17770. Overflow from Twin Lakes continues in a northeasterly direction for about one mile thence easterly about 5 miles to U. S. Highway 395 crossing where a stream gaging station of the City of Los Angeles is located. Below the highway, the water course (called Hot Creek on the Mt. Morrison quadrangle) continues for about 9 miles in a northeasterly direction to the confluence with Owens River. The point of diversion of protestants Chance as described in their protest is located on Hot Creek about

one-half mile downstream from the highway crossing. Sherman Creek, the principal tributary of Mammoth Creek downstream from Twin Lakes, joins the latter stream from the south at a point about two miles above the aforementioned gaging station.

The drainage area above the applicant's proposed point of diversion scales about 11 square miles ranging from a maximum elevation of 11,772 feet to about 8,600 feet.

#### Protestants' Project

According to the memorandum of the April 3, 1958, conference, Protestants Chance claim to be irrigating each year approximately 360 acres of pasture (seeded clover and natural grasses) within Sections 34 and 35, T3S, R28E, under an appropriate right initiated prior to the effective date of the Water Commission Act and by virtue of riparian ownership. From the legal description given in the protest, this property as plotted on the Mt. Morrison quadrangle is contiguous to Hot Creek. The protestants also claim to have under lease from the City of Los Angeles, Department of Water and Power considerable acreage of pasture land in Sections 4, 5, 6, 7, 8, and 9, T4S, R28E, and Sections 32, 33, 34, and 35, T3S, R28E, which is susceptible of irrigation; that the City owned land is likewise claimed riparian to the stream; that except during extremely dry years (when use of water on the City owned land is allegedly disallowed by order of the City) the protestants also irrigate some 300 acres of the leased property; and that more land would be irrigated if the water supply during the critically dry months were adequate.

The protestants claim to divert by gravity from Hot Creek at one or more of four points along the stream; that the water is applied to the land by flooding; that their irrigation season extends from about May 1 to about October 1 of each year; that no shortage is usually experienced prior to July 15; that August and September are usually months of deficient supply; that except for a limited by-pass for the maintenance of fish life the entire flow is diverted during August and September; and that even during years of unusually large runoff the entire flow reaching the protestants' property is put to beneficial use during August and September.

#### Water Supply

The flow of Mammoth Creek (Hot Creek) is measured at a point near U. S. Highway 395 by the City of Los Angeles, Department of Water and Power. The point of measurement scales about one-half mile upstream from protestants' Chance point of diversion. As there is reportedly no intervening use of water, the flow passing the City's gage, less channel losses, represents the flow reaching the protestants' property. Except during extremely low flows such losses are probably within the accuracy of the measurements and will be disregarded in the following discussion. Table I sets forth in cubic feet per second the monthly mean flow of Hot Creek covering the period from October, 1946, through September, 1957, as measured by the City of Los Angeles. As shown in Table I, flow during the months of August and September, the months of primary concern, has varied during

the above-mentioned period from a maximum and minimum, respectively, of 42.0 cfs and 6.26 cfs during August and 19.9 cfs and 2.6 cfs during September. Median monthly flow for the period was 8.6 cfs during August and 5.0 cfs during September.

#### Estimated Water Requirements of Protestants

Present use of water by the protestants from Hot Creek (except during extremely dry years when use on 300 acres of leased property is prohibited) is for the irrigation of 660 acres of pasture, for stockwater and for incidental domestic purposes. As no information is apparently available as to the reasonable water requirements for land being served by the protestants, it is necessary that an estimate be made from the findings of water requirements in other areas of similar physiography.

In 1936 and 1937 the Division of Water Resources made an extensive study of water requirements of Sierra Valley in Plumas and Sierra Counties in connection with the Middle Fork Feather River Adjudication. The results of the investigation are contained in publications by that agency entitled "Report on Water Supply and Use of Water on Middle Fork of Feather River and Tributaries, Plumas and Sierra Counties, California", dated August, 1937, and "Report on Investigation and Water Master Service on Middle Fork of Feather River Above Beckwith, Sierra and Plumas Counties, California, during Season of 1937", dated April, 1938.

TABLE I

Monthly Mean Flow-Mammoth (Hot) Creek  
at U. S. Highway 395

Quantities expressed in Second-feet

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Mean Sec.-Feet	Acre Ft.
1946-47	8.71	9.49	7.51	4.47	5.12	7.64	13.18	57.8	40.5	20.5	6.26	4.07	15.5	11210
1947-48	5.0	4.8	3.6	5.2	3.6	4.3	11.6	30.4	56.6	28.9	8.6	2.6	13.8	9981
1948-49	4.7	3.1	4.3	3.4	2.9	3.2	12.5	34.7	56.8	20.1	8.3	2.7	13.1	9460
1949-50	4.0	4.9	4.1	5.9	5.4	5.1	12.4	36.4	49.9	22.5	6.4	5.5	13.6	9811
1950-51	4.1	27.9	35.1	12.5	10.4	8.2	12.5	38.3	57.2	30.2	16.2	8.0	21.8	15744
1951-52	7.1	5.7	10.5	9.9	8.4	6.1	11.9	61.6	103.5	93.1	42.0	19.3	31.7	22992
1952-53	12.2	7.1	8.7	10.6	6.4	6.7	13.8	16.6	50.1	44.3	10.0	5.0	16.0	11580
1953-54	5.0	5.0	4.1	3.5	5.0	8.5	18.3	50.8	42.0	19.9	6.4	4.4	14.4	10447
1954-55	2.4	5.6	4.8	5.3	4.0	4.4	8.4	19.8	71.3	22.0	7.5	3.3	13.2	9559
1955-56	4.5	4.6	25.3	13.2	7.7	7.1	15.9	54.1	143.3	95.5	37.1	19.9	35.7	25933
1956-57	16.6	12.8	9.4	9.2	10.3	8.7	11.8	26.7	106.6	40.2	13.1	7.0	22.7	16408



Sierra Valley is a mountain valley in the northeastern part of California at an elevation of about 5,000 feet. The winters are moderately severe with the monthly minimum temperature remaining below freezing during the period from November through March. The summers are warm throughout the day, but are cool during the night. During the period from June through September the monthly mean maximum temperature ranges from about 76 to 85 degrees. The highest recorded temperature at Sierraville in a 27-year record was 104 degrees and the lowest was a minus 30 degrees, a range of 134 degrees.

The protestants' property is located at an elevation of about 7,000 feet and although the mean annual precipitation is undoubtedly somewhat less in that vicinity than in Sierra Valley, the summer precipitation and temperatures are believed reasonably comparable. Table II and Table III set forth the monthly temperatures and total precipitation for May through September, 1957, at the United States Weather Bureau Station, Sierraville in Sierra Valley, elevation 4,975 feet; Mono Lake in Mono Valley, elevation 6,520 feet (about 25 miles north of the protestants' property); and Bishop in Owens Valley, elevation 4,108 (about 30 miles southeast of the protestants' property). Relative to the water requirements in Sierra Valley, the aforementioned 1937 report states as follows:

"By reference to studies made on other streams of similar characteristics in mountain valleys in Northeastern California it appears that the return flow from meadow grass irrigation is ordinarily approximately one-third of the gross diversions, where a proper spread and penetration of irrigation water has been obtained, i.e., it is necessary

to divert and apply to meadow grass about 50 per cent more water than is actually consumed in order to secure an adequate and proper irrigation. Such additional water is utilized as a vehicle for spreading. If such an allowance is made for a spreading head over and above the consumptive duty on upper Smithneck Creek, the resultant gross duty of water is calculated to be one cubic foot per second to about 80 acres of irrigated land."

According to Table 84 of the aforementioned report, the gross duty of water for land irrigated from Middle Fork Feather River and its tributaries within Sierra Valley varies from 1 cfs per 47 acres to 1 cfs per 160 acres as computed on a continuous flow basis. Further investigation and study during the 1937 irrigation season, as described in the aforementioned 1938 report, revealed that one cubic foot per second for 80 acres for the area was inadequate and that one cubic foot per second for 60 acres appeared to be more realistic of requirements. The Board concludes that a gross duty of one cfs for each 60 acres irrigated is a reasonable duty for the area in the vicinity of the protestants' place of use in view of the findings of water requirements in Sierra Valley. On that basis, irrigation of 660 acres of pasture will require a continuous flow of 11.0 cubic feet per second.

#### Discussion

Inspection of Table I shows that for the past eleven years flow of water in Mammoth Creek on a monthly mean flow basis has been inadequate to meet the protestants' estimated water requirements during August of 6 years and during September

TABLE II

Average Temperature - Long-Term Mean  
in °F

Station	May	June	July	Aug.	Sept.
Sierraville	50.6	56.8	62.9	61.7	55.8
Mono Lake	51.7	59.8	67.7	66.6	61.9
Bishop	62.6	69.4	75.5	72.7	67.3

TABLE III

Total Precipitation - Long-Term Mean  
in Inches

Station	May	June	July	Aug.	Sept.
Sierraville	0.92	0.57	0.32	0.15	0.48
Mono Lake	0.83	0.21	0.81	0.14	0.41
Bishop	0.20	0.10	0.10	0.14	0.19

of 9 years. As irrigation in that area usually does not extend outside the period from about the first of May to the end of September, diversion under Application 17770 between October 1 and July 31 may be allowed without qualification.

According to the applicant, the period of its greatest demand for water from Twin Lakes will be during those months of surplus flow, and that during August and September the District believes that its present well will produce an amount equal to the District's anticipated future needs. A water supply for a development such as contemplated under Application 17770 must be available year-round. Unlike most irrigation projects, it cannot be designed on a possible deficiency basis without undue hardship to the users. Furthermore, the District may be required from a public health standpoint to provide certain water treatment facilities which could not be conveniently operated should the District, due to the requirements for downstream prior rights, be forced to resort to an alternate supply during periods of low streamflow. On the other hand, Application 17770 is for a permit to appropriate "unappropriated" water and use of water thereunder must be subject to vested rights.

Under the circumstances heretofore discussed, approval of Application 17770 can be allowed year-round provided adequate protection is afforded to the downstream prior right users. The applicant has suggested that during such times as a deficiency exists in Mammoth Creek for downstream users that the District release into the creek from its well water supply an amount equal

to that diverted by it from Twin Lakes. Such a proposal appears fair to all parties and the Board believes that the physical circumstances are such that a provision to this effect can be inserted in the permit which will not be an unreasonable burden on the applicant.

Conclusion

The information before the Board indicates and the Board finds that there is unappropriated water in Twin Lakes which water may be appropriated to a substantial extent in the manner proposed under Application 17770 and that the application may be approved and permit issued, if appropriately conditioned, without injury to downstream existing rights.

ORDER

Application 17770 for a permit to appropriate unappropriated water having been filed, a protest having been submitted, the parties having stipulated to proceedings in lieu of hearing, a conference with all record interested parties having been held, the Board having considered all available relevant information, and said Board now being fully informed in the premises:

IT IS HEREBY ORDERED that Application 17770 be, and the same is hereby approved and that a permit be issued to the applicant subject to vested rights and to the following terms and conditions to wit:

1. The amount of water appropriated shall be limited to the amount which can be beneficially used and shall not exceed 2.0 cubic feet per second to be diverted from January 1 to December 31 of each year.

2. The maximum amount herein stated may be reduced in the license if investigation so warrants.

3. Actual construction work shall begin on or before September 1, 1958, and shall thereafter be prosecuted with reasonable diligence, and if not so commenced and prosecuted, this permit may be revoked.

4. Said construction work shall be completed on or before December 1, 1959.

5. Complete application of the water to the proposed use shall be made on or before December 1, 1965.

6. Progress reports shall be filed promptly by permittee on forms which will be provided annually by the State Water Rights Board until license is issued.

7. All rights and privileges under this permit including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

8. At such times during August and September of each year that flow of Mammoth (Hot) Creek at or near U. S. Highway 395 Crossing in Section 32, T3S, R28E, MDB&M, does not exceed 11.0 cubic feet per second, permittee shall, upon demand of Protestants Chance, release into Mammoth Creek from a nontributary source at any point between Twin Lakes and said highway crossing sufficient water to provide a flow of 11.0 cubic feet per second at said highway crossing; provided however, permittee shall not be required to release water into Mammoth Creek at a rate in excess of that being diverted by permittee from Twin Lakes.

9. This permit is conditioned upon full compliance with Section 5937 of the Fish and Game Code.

Adopted as the decision and order of the State Water Rights Board at a meeting duly called and held at Fresno, California, on the 14th day of May, 1958.

/s/ Henry Holsinger  
Henry Holsinger, Chairman

/s/ W. P. Rowe  
W. P. Rowe, Member

/s/ Ralph J. McGill  
Ralph J. McGill, Member